

NMGIC Fall Meeting 2006

3D New Mexico – Past, Present & Future

NMGIC

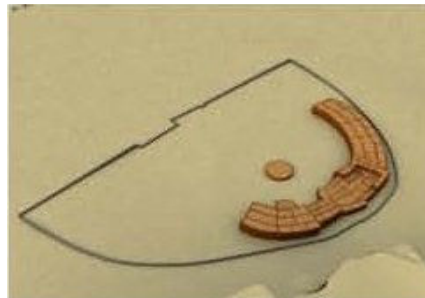
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NEW MEXICO GEOGRAPHIC INFORMATION COUNCIL

The Map Legend

The 2006 New Mexico Geographic Information Council, Inc. (NMGIC) Fall Meeting will be held Friday, November 17. The theme is "3D New Mexico—Past, Present and Future", featuring a special showing of "*The Mystery of Chaco Canyon*", with an introduction by the film's Director, **Anna Sofaer**, President of The Solstice Project. This groundbreaking documentary employs advanced 3D animation techniques to explain how the inhabitants of Chaco Canyon created the world's only known site that perfectly documents both solar and lunar cycles. The meeting will be held at the usual location ... the UNM Science & Technology Park at 801 University Boulevard SE in Albuquerque, NM. Registration begins at 8:00am, and the meeting proper starts at 8:30am.

Admission is free to NMGIC members who have paid their 2006 dues (\$25/year, or \$10/year for students with ID from their educational institution). Non-NMGIC-members may attend for a one-time fee of \$15, or \$7.50 for students. A box lunch and beverage is included with the admission fee. At the conclusion of the meeting, a door prize will be given away: a signed copy of "The Mystery of Chaco Canyon" DVD; one must be present to win. *(Continued on page 3 ...)*



Are We Un-Coordinated?

by Rick Koehler, State of New Mexico GAC Chair

New Mexico has a long history and a good track record when it comes to the degree of cooperation, collaboration, and community spirit exhibited by its geospatial professionals. NMGIC celebrated its twentieth anniversary back in 2004. The State of New Mexico Geospatial Advisory Committee (GAC) got rolling in 1991, and served as an example for the nation, hence the inaugural meeting of the National States Geographic Information Council (NSGIC) held in Santa Fe in 1992. Whether GAC or NMGIC, the people that participate in these groups do so as volunteers, giv-

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The Map Legend

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NMGIC Fall 2006 Meeting *(Continued from page 1)*

The Agenda for the Fall 2006 NMGIC Meeting:

8:00 - 8:30	Set up / coffee / check-in
8:30 - 9:00	Welcome and Announcements by Kurt Menke, NMGIC President
	GPS Height Modernization Report – Bill Stone
	Board Election Results – Janet Greenlee
9:00 - 10:00	The Mystery of Chaco Canyon, with Introduction by Anna Sofaer, President, Solstice Project
10:00 - 10:15	Break
10:15 - 11:15	The Sun Dagger: Creation of an Interactive 3D Computer Model of the Sun Dagger Site in Chaco Canyon — Phillip Tuwalestsiwa, Anna Sofaer, Alan Price, James Holmlund, and William Stone
11:15 - 11:45	Exploring the Shallow Alluvial Groundwater of the Rio Grande Bosque in 3-D: Combining Hydrology, Chemistry, and ArcGIS - Maceo Martinet
12:00 - 1:00	Lunch (Box lunch provided by NMGIC on site)
1:00 - 1:15	Valle Vidal: An Endangered American Treasure - Kurt Menke
1:15 - 1:45	Title and Description Not Finalized - Jim Holmlund
1:45 - 2:00	Break
2:00 - 2:30	Introduction to 3D GIS - Rich Friedman
2:30 - 3:00	Rebuilding Downtown Chaco Canyon - Rich Friedman
3:00 - 3:02	Drawing for Door Prize – signed copy of “The Mystery of Chaco Canyon” DVD. Must be present to win!

GIS Certification: New Mexican Experiences

As most of you know, since January 1st, 2004, geospatial professionals could apply for a “GIS Professional Certification” (GISP) under the auspices of the GIS Certification Institute (GISCI, <http://www.gisci.org>). What is a GISP? A GISP is a certified geographic information systems (GIS) Professional who has met the minimum standards for ethical conduct and professional practice as established by the GISCI. As of the publication of this MapLegend, 1324 people have received their GISP so far, including 11 New Mexicans. For comparison, there are 41 GISPs in Colorado, 24 in Arizona, 68 in Texas, just 8 in Utah (slackers!), and a “passel” (111) in North Carolina. And for additional comparison, there were 908 GISPs as of this time last year, including 5 New Mexicans. Which means in one year, it has grown by about 46% nationally, and over 50% here in NM.



During discussions on this topic, I've heard a range of opinions:

- “You need professional certification to remain competitive in today’s job market”
- “My boss said I had to do it”
- “Well, I guess it wouldn’t hurt to have it; maybe I’ll need it someday”
- “Why waste the time and money: it’s not required where I work”
- “Bah! How lame can you get? The only people falling for this certification stuff are the people who don’t have real skills.”

Divergent views, indeed. Another common response is “I’ve heard it’s really hard to wade through the whole certification process, collect all the necessary paperwork, answer a bunch of questions, remember stuff you did years ago, etc.” Well, only you can decide what the value and reality of GIS Certification is for you, but in answer to that last statement (“It’s too hard!”), what’s follows is some input from a few folks in our state that actually *did* go through the GIS Certification process:

from **Kurt Menke**, GIS Analyst/Programmer, EDAC (and NMGIC President) ...

“My Experience with GISP Certification:

When Stan Morain said he’d pay for my GISP Certification I thought why not. So I downloaded the application and started going through it. I actually found the process to be straightforward and surprisingly not too time consuming. Fortunately, I’ve always been good about documenting my professional activities which helped. In total I spent about a week putting things together and adding up my points to see if I had enough to qualify. Once I realized I was going to easily have enough points I only documented publications and other items that were readily accessible and easy. I skipped the remainder. Once I submitted my info the Certification Institute turned it around within a month which I was really impressed with. In the end I’m not sure what it all means but it was an easy way to add extra letters after my name.”

from **Susan Morrison**, GIS Analyst, RGIS Technical Support ...

“As for the GIS Certification process:

It seemed like a lot of busywork at first. I hadn’t done my resume in a while, so in one respect I found it interesting to see where I’ve been and remember some of those projects from long ago.... I realized half way through that some of the items I listed I didn’t need to because I had more than enough points in some areas, but was a bit fascinated where the road had taken me over the past ten + years. So I am glad that I did it.”

from **Joel Pearson**, GIS Coordinator, Los Alamos County ...

“Here is my short story:

After procrastinating for over a year and a half to do the GIS Certification I finally made up my mind to go through with the application process. I went on line to the GIS Certification Institute (GISCI) website <http://www.gisci.org>

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GIS Certification: New Mexican Experiences

(Continued from page 4)

www.gisci.org/ and downloaded all the necessary forms and read through the instructions. The process looked pretty straight forward; it was just a matter of collecting and organizing all of ones accomplishments. The categories required by GISCI for certification are Education, Conference Attendance, Official Transcripts and Educational Achievement Documentation, Professional Experience, Contributions to the Profession, a Resume and Employer Letter. In the end the only time consuming part was getting my official transcripts from the universities I attended. Access to Adobe Acrobat Professional would be very helpful in that you can write and save into the downloaded PDF application, otherwise it's print out the application and hand enter all your information."

from **Larry Spear**, Program Manager, Division of Government Research, UNM ...

"My GIS Certification Experience:

I received my GISP certification from the GIS Certification Institute (GISCI) in April 2005. My experience with the application procedure was on the whole mostly positive. It did require a couple of days of dedicated effort to compile the required materials and to properly fill out the application forms and include all the required materials in the designated order. In my opinion, the point based criteria used by the GISCI to determine eligibility for certification seemed to be very well balanced and provided ample opportunity to demonstrate your knowledge, skills, and experience. It is designed to measure your professional achievement in the GIS/GIT field in three broad categories consisting of educational achievement, professional experience, and contributions to the profession.

Because I have been employed in an organization that conducts GIS and statistical projects for over 25 years I was able to claim a considerable amount of points in the professional experience category. As I have also attended many GIS related conference and occasionally have presented papers and posters I easily accumulated points in the contributions to the profession category. I was very pleased by the educational achievement category where I was able to get credit for a graduate degree, additional university courses taken since my graduation, plus the many ESRI Virtual Campus classes that I have completed.

I recommend obtaining this certification to anyone who is currently practicing in the GIS/GIT field. It is a great way to demonstrate your previous achievements and commitment. As this certification requires renewal, the process of obtaining recertification will help guide my future planning to remain current in the field."



Based on the comments above, apparently the process isn't quite as daunting as it appears at first glance, and those who have gone through it feel it's worth the effort. Is it for you? You decide. If you're interested, you can visit www.gisci.org for complete program details.



*"I found it interesting to see where I've been
and remember some of those projects from
long ago ..."
- Susan Morrison*

Note From NMGIC President Kurt Menke

Dear NMGIC'ers:

I think for many in the GIS community it's been a long and busy year. I know it has been for me. The process of following the details of the statewide DOQQ acquisition, the GRP proposal, the GIS Summit, the New Mexico GIT Strategic Planning Group, and now SWUG '07 planning, have all taken a lot of time and energy from everyone. Now I can report that Gar Clarke is doing an admirable job in leading the NM Strategic Planning Group, and the SWUG planning committee has narrowed down the location for next years SWUG meeting to either the Inn of the Mountain Gods near Ruidoso, or La Fonda in Santa Fe. Hopefully, all this work will end up with improved coordination in state GIS activities, cooperation from the CIO, and a great NM SWUG meeting next year.

With all of this work behind us, NMGIC is offering up a fall meeting that promises to be a really entertaining and interesting one. The topic is, 3D New Mexico: Past, Present, and Future, and I think it will be a great event to end the year on. 3D GIS always elicits oohs and ahhs, even if it isn't showing new or interesting data. However, the speakers at this years meeting will share some very creative uses of the technology. First you will munch on popcorn while watching the documentary The Mystery of Chaco Canyon. This is a groundbreaking film which employees advanced 3D animation techniques to explain how the inhabitants of Chaco Canyon created the world's only known site that perfectly documents both solar and lunar cycles. NMGIC is extremely honored to not only be able to show the documentary, but to also have the showing preceded by a personal introduction from the films director, Anna Sofaer. Next on the agenda is a talk by the team that assembled the film. They will talk about the work that went into the 3D computer model of the Sun Dagger site in Chaco Canyon. Rich Friedman will then show his work in Rebuilding Downtown Chaco Canyon in 3D. Rounding out the agenda will be talks that discuss the use of 3D GIS in applications from groundwater to protecting Valle Vidal. So I encourage you to move away from the computer, drive over to the meeting, take a load off, and enjoy some really unique applications of GIS.

Hope to see you on November 17th!

Kurt Menke, NMGIC President

Super Fun Picture Quiz !

Mystery Location

First person to correctly identify the mysterious location of this photo will win an equally mysterious prize. Hint: it's in New Mexico! Contact the Editor with your mysterious guess.



Are We Un-Coordinated?

ing their time and energy in the belief that folks working together can accomplish more than they can working alone. Coordinating efforts, whether in terms of combined data acquisitions, software purchases or licensing, agreeing upon standards, recommending necessary policies, or just gathering periodically to network and sharing ideas, serves the geospatial community and has been the hallmark of GIS in New Mexico. And, to some extent, made us the envy of other states. But as time marches on and things get “more complex”, it has become apparent that just maybe we need a bit more coordination — a greater degree of formalized coordination. It’s not that we’re “un-coordinated”, but rather, we’ve reached the limits of what we can do given the current structures based strictly on volunteerism.

On a national level, NSGIC (<http://www.nsgic.org>) has pushed the concept of geospatial coordination through a metric of state coordination called the NSGIC Nine Coordination Criteria:

1. Paid GIS Coordinator
2. Defined Authority
3. CIO Interaction
4. Political Champion
5. NSDI Responsibilities Assigned
6. Effective Local Government Coordination
7. Sustainable Funding Mechanism
8. Contractual Authority
9. Federal Government Works through Council

NSGIC also launched what they term “The Fifty States Initiative” (see http://www.nsgic.org/hottopics/fifty_states.cfm) with a goal of achieving greater coordination across the nation, a degree of uniformity and consistency, and methods for cost reductions, especially in relation to federal geospatial expenditures. “Boring”, you say? Well, perhaps a little bit, but also with potentially far-reaching consequences. Whether those of us in New Mexico agree with all the aspects of “The Fifty States Initiative” or not, the writing’s on the wall - the linkages and tie-ins that NSGIC has created with the Federal Geographic Data Committee (FGDC), and the USGS National Geospatial Program Office (NGPO) are becoming hard-wired. In the not-too-distant future, it’s likely that those states that can’t say “yes” to most of the NSGIC Nine will have a difficult time receiving their proper share of funding.

One of the key elements is having a central point of contact for geospatial issues. Over 60% of states in the US now have some sort of “State GIS Coordinator” or “Geospatial Information Officer” (GIO). The time has come: New Mexico needs a State GIS Coordinator. Having this “single point of contact” (along with the obvious companion criteria - “a sustainable funding mechanism”) will not solve every problem and usher in the golden age of GIS. However, it will be a good start. This last June, Roy Soto, the NM Chief Information Officer, hosted a GIS Summit attended by over 250 people. Facilitated sessions were conducted, and supplemented by prior information gathering, the Summit resulted in a consensus about what New Mexico needs most in geospatial coordination terms: a State Coordinator, a state Base Map with requisite framework data, a degree of consolidation and centralized management in state government, and some sort of services program or center.

As with any endeavor, you have to figure out where you want to go, and how you’re going to get there. In this case, this means creating a Geospatial Strategic Plan. Towards this goal, New Mexico has secured \$50,000 in NSDI Partnership Grant funding to develop a Phase One Geospatial Strategic Plan. Gar Clarke, of the Office of the State Engineer, working with the OCIO, is heading up the effort to create this plan. NSGIC, through the Fifty States Initiative, provides a wealth of materials to guide this process. I urge you to educate yourself on this topic, participate if you are interested, but above all, support this effort in any way you can. Talk to your colleagues, get involved. Make your voice heard.

For more information, contact Gar Clarke, and check out these documents:

- <http://www.gisac.state.nm.us/docs/GACLetter8.pdf>
- http://www.gisac.state.nm.us/docs/GACLETTER_AttachmentA.pdf

GIS Standardization: Need, or Myth?

by Leland J. S. Pierce, New Mexico Department of Game & Fish

Is the call for standardization in GIS based upon a need or a myth?

“...the great enemy of the truth is very often not the lie... but the myth.” - John Fitzgerald Kennedy

Myths, I believe, get rolling like a snowball down a hill when we know we need something, but fail to pin down what that need truly is. It takes on a life of its own, something along the lines of the old joke that sex actually isn't all that important-unless you ain't getting any. Driven by a undefined desire, lacking those devilish details of how to scratch the itch and who'll pay for the massage, our focus remains upon the need and not the resolution. If the itch isn't satisfied, the idea of relieving it becomes more and more important, building and building until the desire for relief overwhelms common sense-we must relieve it, we must reinvent how to do it, and it must be done perfectly. Like a myth, the desire becomes unattainable. My sense is the idea of having set standards for all things GIS to adhere to is beginning to take on mythical importance.

These last few years I've had the privilege of being hip-deep in efforts to acquire funding for coordination within the Geoscience community, even straying into and almost catching something from the jungles of politics in New Mexico. It has gone like this: around late spring everyone comes together to agree that we need funding to improve the coordination for what it is we do across the State; then we return to our cubicles; around the end of the year a few nuts actually try for that funding and scramble for approval from the legislature and the governor's office; squabbling usually ensues after things are put onto paper, so we scramble to get along; then we hold our breath. Throughout the process we hold meetings and summits, always starting with an analysis of our business needs (which I'm told have not changed a whole lot in the last twenty years or so, beyond technological advances), and always we have the same themes (in no particular order to stave off squabbles): more communication, somewhere to get answers, baseline data for the whole State, someone to take charge and kick butt, much more coordination of efforts, and standards. We must have standards!

Why, to hear us talk at these group hugs and confabs over legislative bills, we must be irresponsible no-accounts who run around willy-nilly doing our Geoscience thing with no regard for accuracy, accountability, and efficiency. It's a wonder we've kept our jobs at all, as dire as the need for standards seems to be. And yet, I've had my doubts about that. During my tenure as chairman of the Geospatial Advisory Committee I would pass on that the committee had settled upon UTM NAD 1983, Zone 13 as the standard for baseline data; as I would do so, however, I kept thinking that where once one did not change a map projection without a new funding grant, now we change projections on the fly. After all, part (part, I say part!) of Geoscience deals with the computer industry, which changes every second on weekends and slow work days, and ostensibly their job is to make the lives of their customers easier for such issues as managing projections. For instance, for emergency response and cybersecurity in the State of New York, there are no strict standards for data sent to the Critical Infrastructure Response Information System (CIRIS); instead, thanks to current technology, the staff of CIRIS adapts the data to the needs of the system. What's more, if one can manage to translate their business need into the gibberish database designers prefer, it shouldn't be impossible to get databases to work together. Therefore, if the format and the data can be quickly adjusted for a given purpose, what standards do we really need beyond metadata and a commitment to quality work and quality communication? What do we really need, after all is said and done?

Here's what came out of the recent GIS Summit, concerning standards, “In five years, achieve a widely used, interoperable geospatial information system that is enabled through the adoption of existing or newly developed standards that have been identified through consensus development among stakeholders.”

Okay, yes, this is government speak (when my word processor had a go at this line, its recommendation was to shoot the horse), but it goes less to a particular suite of standards than it is a call for everyone to work together. Frankly speaking, one man's needs-such as level of resolution on imagery-are another's extravagance, and demanding the latter to live up to the former is no way to engender cooperation. Any community is about working together, so my suggestion is to keep things simple: the Geoscience community commits to quality metadata on all products they produce, and commits to a method of resolving issues in an inclusive, non-restrictive fashion. Perhaps some day there will be conferences in the state of New Mexico where Geoscience professionals may come together, learn

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GIS Standardization: Need, or Myth?

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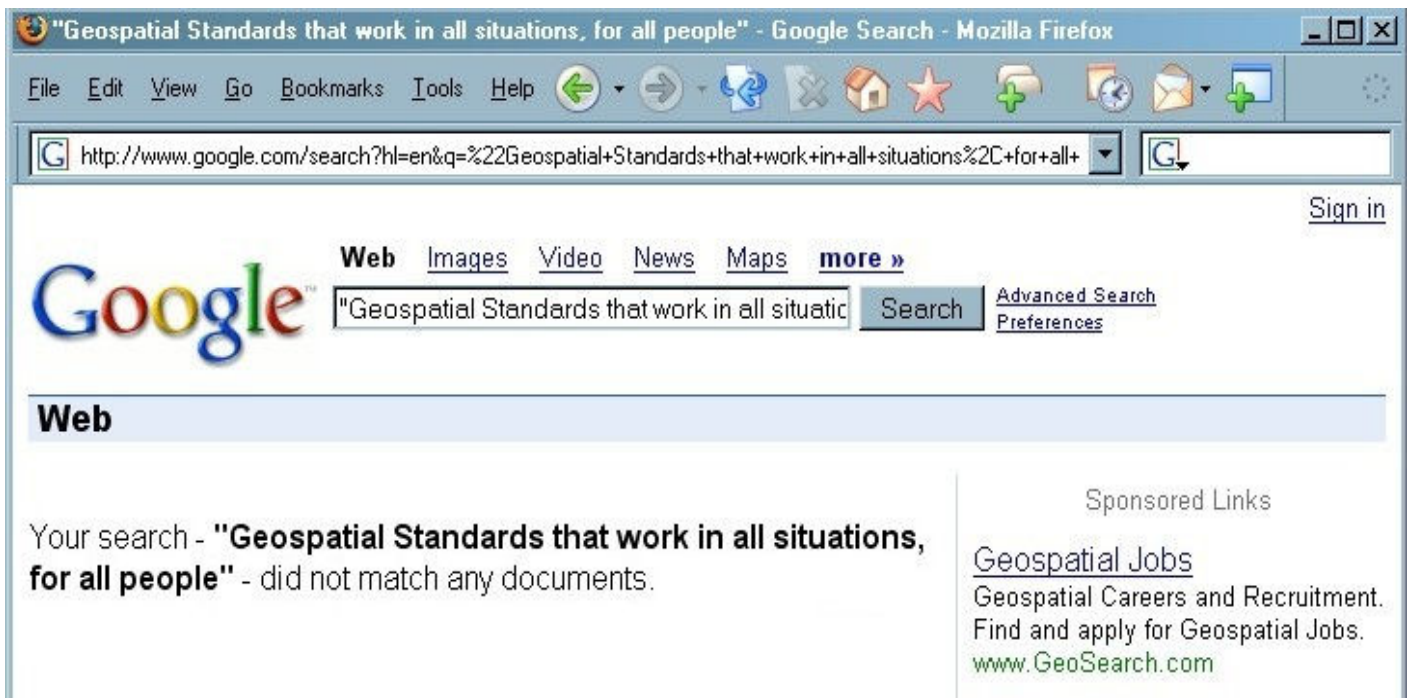
from one another, and air out there issues (or maybe a group is already putting on such conferences???)

And perhaps at those conferences there might be a standards committee to deal with how things are named, getting help and funds to those who need it, and even fixing up issues with how we do metadata itself (as my all-knowing mentor at the Natural Heritage New Mexico, Teri Neville puts it, "*Looking at the FGDC metadata standard, it is nice to know what all the attributes of a table in a GIS layer are, but see how many people know what Attribute Domain Values or Range Domain or Codeset Domain are- look up the definition for these and see if it is clear.*"). Throughout the year a list of grievances, questions, and issues might be / would be maintained, and then addressed at the conferences. Other than that, let good people do their work.

Now, here is the purpose of this essay. As one reading a journal entitled "MapLegend", no doubt you've come across this situation: a muckety-muck needs you to make a map, but has no clue what he wants. He gives you some vague ideas of what the product should look like, and then notes since you're the expert, you tell him what he needs. So what you do is make a bad map. The muckety-muck squeals like you just ran over his prized poodle with your lawn mower, he rants and raves that he needed this, this, this, and that — and now you have what you need to make the correct map. You just needed to smack the muckety-muck with a rolled up newspaper to get his attention.

Gentle reader, consider yourself smacked. If there are specific standards you require, send them to the editor of this journal pronto. If you like the idea of keeping things simple and letting good people do their work, send that to the editor, too. Get the dialogs of specifics up and rolling.

But this may not be enough to get you typing on your keyboard. So here's another thought: when muckety-mucks get tired of the grunts whining about needs, they eventually make a decision and everyone gets stuck with the consequences. In essence, that rolling snowball gets redirected toward a cliff and any village down below is plain out of luck. Muckety-mucks were at the GIS Summit, and my guess is snowballs are about to fly. Therefore, if standards are important to you, or you just don't want to get squashed, speak up. Settle the issue of standards, such that we may move on to far more vital issues, such as communication and coordination.



Cool Websites - GML / XML

by Denise Bleakly

```
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</gml:Point>
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For this edition of Cool Web sites, I've chosen to focus on information resources concerning the use of GML and XML to distribute and share geographic data. I've recently been asked about GML and how we could use it to share data. I did a bit of research and want to share my findings with you. These are culled from a variety of articles, and weblinks. This may not be an exhaustive list and as always, if you have any additions, please feel free to contact me at drbleak@sandia.gov or at 505.284.2535. -Denise Bleakly, June 2006

The Open GIS Consortium (OGC) was the originator of GML for the use by the GIS community. Their website (<http://www.opengeospatial.org/>) has the majority of the technical information concerning GML; you will need to drill down to get to the GML specifications.

Galdos Systems Inc – Home Page – A vendor providing tools using GML Technology and information concerning GML: <http://www.galdosinc.com/>

Introduction to GML by Ron Lake Galdos Systems Inc.
<http://www.w3.org/Mobile/posdep/GMLIntroduction.html>

Making Maps with GML a white paper
<http://www.galdosinc.com/files/MakingMapsInGML2.pdf>

Wireless Developer Network article, "Top 10 Benefits of Using GML" can be found at the following URL:
<http://www.wirelessdevnet.com/channels/lbs/features/top10gml/>

Geoplace.com definition of HTML, XML, GML: <http://www.geoplace.com/gr/webmapping/terms.asp>

CoverPages online resources for markup language technologies: GML Links
<http://xml.coverpages.org/ni2004-03-26-a.html>

GIS Lounge GML links: <http://gislounge.com/ll/gml.shtml>



A Listing of books related to GML, Google earth, Internet GIS, GeoWeb:
http://www.gogeo.ac.uk/cgi-bin/geoPortal10/Books_GeoW.pl

Description of the book, "Geography Mark-Up Language: Foundation for the Geo-Web":
<http://www.wiley.com/WileyCDA/WileyTitle/productCd-0470871539.html>

Overview and **simple tutorial:**
<http://www.isotc211.org/WorkshopsPallanza/Presentations/Portele.pdf>

Digital Earth project Reference model – has a good overview of standards, models, etc for digital geographic representations: <http://www.digitalearth.gov/derm/v05/>



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***Bringing Very Spatial People
Together Since 1984***



2007 GIS Calendar of Events

GITA

GITA's Annual Conference 30, March 4th—7th, 2007, San Antonio, TX

NSGIC

National States Geographic Information Council 2007 Midyear Conference, March 25th –29th, 2007, Annapolis, MD

ESRI

ESRI 27th International User Conference, June 18th—22nd, 2007, San Diego, California, USA

URISA

URISA's 2007 Annual Conference: August 20-23, 2007: Washington, DC

SWUG

SouthWest User Group Conference, Fall 2007, New Mexico, dates and location soon to be established

MAP WORLD FORUM

Map World Forum January 22-25, 2007: Hyderabad, India (let's *all* go!)
<http://www.mapworldforum.org/>

2007 Membership Dues

New Mexico Geographic Information Council, Inc.

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Enclosed is my: Check Money Order Make Check or Money Order payable to: NMGIC, Inc.

Membership Dues:

Individual: \$25.00

Student: \$10.00 (Must include a photocopy of current Student I.D.)

Platinum Corporate: \$250.00 - Includes two seats to each meeting and a half-page ad in each Map Legend

Gold Corporate: \$150.00 - Includes one seat to each meeting and a business card sized ad in each Map Legend

Payment should be mailed to: NMGIC, Inc. , PO Box 9445 Albuquerque, NM 87119-9445